4th Annual Physiotherapeutic Convention

A wonderfully interesting program has been arranged for this big annual meeting—see pages 15, 16, 17 and 18 of this Magazine. The Convention will be held at

The Drake Hotel, Chicago
October 12 to 16, 1925

Physicians and surgeons who are interested in Physiotherapy are cordially invited to attend, without charge or obligation. The program, sponsored by the Fischer Company, will be wholly in charge of well-known physicians and surgeons. Reservations at the Drake or other hotels will be attended to on request by the

Educational Department
H. G. FISCHER & COMPANY, Inc.
Physiotherapy Headquarters
2335 Wabansia Avenue CHICAGO, ILL.

FISCHER'S MAGAZINE

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SEPTEMBER, 1925

CO-OPERATION

BY CO-OPERATIVE APPLICATION ALL DIFFICULTIES ARE SURMOUNTED AND OBSTACLES DISAPPEAR. EVEN THE ORDINARY ROUTINE OF WORK ACQUIRES A SPECIAL SIGNIFICANCE BECAUSE OF CO-OPERATION.

Fischer's Magazine

Devoted to the advancement of the Science of Electro-Physio-Therapy and to the interests of those earnest and enlightened medical men who are practicing it.

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The October Convention

Year by year, the Annual Physiotherapeutic Convention continues to reflect in the breadth of its program and the impressiveness of its arrangements, the development and the ever-widening acceptance of the science of physiotherapy.

This year's Convention will be held at the Drake, home of conventions. The five-day program, crowded with interesting lectures and clinics, is given in full on pages 15 to 18 of this magazine. Based on the experience of former years and the suggestions of physicians and surgeons who have attended former conventions, many improvements are planned for this meeting.

The program, for example, has been subdivided to permit the specialist to study his own subject more intensively. There will be sections on:

Eye, Ear Nose, and Throat
Gynecology and Urology
Surgery
Dermatology, including malignancies
Internal Medicine
Industrial Physiotherapy
Miscellaneous Practise
General Diathermy

Another improvement which will be greatly appreciated has been made in the arrangement of the clinics. At last year's Convention there was some crowding at certain clinics. This year, each doctor desiring to attend any particular series of clinics will be asked to register at the desk for those clinics. He will then be notified as to the exact hour and location of the clinic to which he is assigned. And clinics will be repeated as often as necessary, in order that each may be attended only by a small group, each member of which will be able to see every detail of the work.

No effort will be spared by the sponsors of this Fourth Annual Physiotherapeutic Convention to make it the most interesting and profitable one for the visitors that has ever been held. While the Convention itself will be wholly in charge of physicians and surgeons, all the details of arrangements, accommodations, etc., will be taken care of by attendants drafted from the Fischer organization.

Registrations are coming in from all parts of the country. Reservations at the Drake and other hotels are being made, and we recommend to medical men who are interested, that they write the Educational Department of H. G. Fischer & Company giving full instructions as to what reservations they desire, where they are to be made, and for how long.

The 9th Annual Picnic

Every year, along about midsummer, the entire Fischer organization leaves the business flat for one whole day, and migrates to a grove on the DesPlaines River for the Annual Picnic. That's what happened on July twenty-second, this year; which explains why those readers of FISCHER'S MAGAZINE who telephoned us that day found no one at home!

We traveled out to the picnic grounds in a fleet of busses and autos about three blocks long. And when we got there, did we have fun? Say, Doctor, we didn't have nothin' else but! Races and contests, tug-of-war, sparring match, baseball game, dancing—from the moment we got there until we left at seven p. m., tired but happy, there was one continuous round of wholesome play.

The picnic, with its genuine spirit of cameraderie, is one of many reasons why the Fischer organization operates like a big business family, with every member interested in sustaining the family prestige.

Diathermy in Biliary Affections

By DISRAELI KOBAK, M. D.
Attending Physiotherapist, Cook County Hospital
Chicago, Illinois

Certain inflammatory diseases of the biliary apparatus still represent perplexing diagnostic and therapeutic problems, in spite of the forward strides made by surgeons, internists and pathologists.

Fortunately, we need not idly fold our hands as therapeutic nihilists, for, assuming that a diagnosis of biliary disease has been made before too much tissue has been rendered functionally useless, we possess an agent which can influence deep inflammatory processes with the promise of a *restitutio ad integrum,* and this agent is *diathermy.*

The Function of Diathermy

We are familiar with the effective results obtained by diathermy in inflammatory affections elsewhere in the body, and we also know its definite physiologic influence on perverted metabolism. These favorable effects have, naturally, suggested to us to extend the application of this physical agent to non-malignant, inflammatory processes of the liver, gall-bladder and bile ducts.

Although conversive heat by high frequency currents has stood the test of criticism as a scientific and effective modality, we proceeded very cautiously at first, until by repeated experiences in a number of selected cases we became clinically convinced that we were obtaining satisfactory results. These results were compared with animal experiments, which will be published in detail at some later date.

We know that the action of medical diathermy within tissue structure is primarily a production of local pyrexia. The current of tremendous high-frequency, when accompanied by the proper high voltage or pressure, produces, by virtue of the intracellular friction of the energy and the resistance of the tissues, a measurable and definite amount of heat within the tissue substance—a transformation of electric energy into caloric energy. By reflex action, because the heat acts as a foreign invasion, the circulation is markedly increased both locally and distally, producing a flooding of the organ by heated and freshly oxygenated blood and lymph. Just as general pyrexia in any febrile condition activates the phagocytic and defensive bodies so also does local pyrexia, irrespective of whether it be due to internal or external causes.

Stasis is reduced by an increased circulation. The fibrosis is reduced or retarded when constantly bathed in a hot and active circulation. Absorption of toxins and the removal of waste products always follows an active circulation. Distant as well as adjacent structures and organs are equally benefited by the hyperactive and heated circulation. The endocrine chain as well as the circulatory and neural systems are proportionately benefited. Elimination is increased by the measurable respiratory exchanges as well as by the other excretory organs. The skin becomes warm and moist, while pain is relieved, due to the sedative action of heat upon the irritated nerve endings. In some instances the varying degrees of heat may very effectively destroy dormant bacteria. Accordingly, we have in diathermy a potential physiologic modality, that allows a truly scientific explanation and logical application in the affections under consideration.

Ascites

When one recalls with what gratifying ease an edematous hand or foot is reduced to normal size by diathermy, the idea suggests itself that ascites may also be relieved or reduced by the same method. Moreover, when one further recalls the fact that diathermy has absorptive powers, i. e., that it removes transudative serum by way of a hyperactive vasodilated circulation, one feels that by diathermizing an ascitic abdomen one may obtain greater effect than by paracentesis.

Cases of ascites thus treated by me have shown decided improvement both locally and generally. The increased heat dilates the vascular system. The fluid is carried off by osmosis by virtue of an overactive circulation. Stasis is relieved, for it cannot exist in the presence of a physiologically engorged, active circulation. Irritants and toxins are swept off by this active circulation and the entire body is benefited generally.

The heated blood, sweeping through the alveolar lung substance and the heart muscle, benefits both of these organs, so that the heart tones become more regular and normal, while the respiratory exchange shows an increased CO_2 output and an increase of nitrogen and phosphates in the urine. At the same time, sphygmomanometer readings indicate a temporary fall in blood pressure in the hypertensive types, and, contrarily, low-tension types show temporary but decided rise in pressure. These phenomena are explainable by the fact that venous congestion is relieved through the marked activity of the arterial circulation. Visceral congestion is relieved. The liver, the intestines, and other organs within the abdominal cavity are made to disgorge the stagnant pools of blood which choke their structures. When the action of the diathermic current has subsided and the blood stream returns to its normal channels, freshly oxygenated blood enters in great abundance into the previously anemic or venously congested areas. The parts are also placed in a state of better defense against the invasion of toxins and bacteria.

Our experience in the treatment of ascites has been most effective when sedative technic was employed. The purpose of extreme sedation, according to Sampson, permits a greater volume of blood to flood the venously congested and anemic organ without arousing the reflexes to carry off the freshly heated blood supply. Relatively small milliamperage has been used when diathermizing liver structure for the reason that, because of its greater density, less milliamperage is required to heat the structure. Furthermore, to assure depth of penetration with small heat effect, the bipolar technic, alternated with 800-1000 milliampere D'Arsonval, is the method of choice.

In spite of the apparent benefits, we cannot believe that regeneration can completely take place when cell structures have been completely destroyed. It is apparent, however, that degenerative changes can at least be arrested and partial metabolism salvaged from the progressively destructive process, ensuring comfort to the patient.

Icetrus

Chief amongst the factors that influence jaundice are the various irritants or toxins that produce inflammatory swelling of the terminal portions of the common bile duct. Osler recognizes Murchison's classification, which is (1) obstruction by foreign bodies within the ducts, as gall-stones and parasites; (2) inflammatory tumefaction of the duodenum or of the lining membrane of the duct; (3) by stricture or obliteration of the duct; (4) by tumor closing the orifice of the duct or growing in its interior; (5) by pressure on the duct from growths of the stomach, liver, pancreas, kidney or omentum.

Here, bipolar diathermia is a valuable adjunct. It must be given sedatively at first and with fairly low amperage. Because of the absorptive qualities of diathermia the sudden and rapid elimination of cholic toxins and bile into the general circulation often produces symptoms of intoxication. Furthermore, the diathermized liver and gall-bladder do not need high amperage because of their comparatively dense structures.

It has been our experience that relatively low heat with bipolar diathermia is a valuable adjunct in the first three classifications enumerated by Murchison. The last two, dealing with neoplastic obstruction, fall clearly within the realm of surgery. We have found that sedative therapy must be observed in order to obtain both immediate and lasting results.

Comparatively low amperage and deep penetration by high voltage are important factors in the treatment of this condition. A milliamperage over 800-1000 produces great heat discomfort over the liver region and tenderness and pain over the gall-bladder. This is explained by the dense liver structure, like bony structure, offering greater resistance to the penetrating current, and therefore requiring less volume to heat the organ. The tenderness over the gall-bladder is due to the greater blood volume within the gall-bladder region, producing increased biliary tension in an already chronically distended or plugged up common bile duct.

Decongestive action of heat penetration is nowhere more dramatically demonstrated than in jaundice. Improvement by diathermia has been rapid when a low amperage and a sedative technic is employed. Inflammatory tumefaction is definitely relieved by virtue of a hyperactive circulation which throws the toxins and waste products into the greater circulation. In the presence of local pyrexia and active circulation, stasis, congestion, irritation and the formation of biliary calculi cannot take place.

From what has been said, it can be readily seen that we have in diathermy a physical agent, which, theoretically as well as practically, must appeal to all unbiased observers as one of the important means for favorably influencing biliary inflammation.

It must not be forgotten, however, that diathermy is not a specific or panacea for all biliary troubles. Surgery has its well-defined indications, and internal medicine, with a suitable dietetic and hygienic regime, finds a large field of usefulness.

(*Abstracted from Clin. Med. Aug. 1925*)

Annual Meeting of the American College of Radiology and Physiotherapy

The Annual Meeting of the American College of Radiology and Physiotherapy will be held at the Hotel La Salle, Chicago, October 19th to 23rd, 1925. An interesting program has been arranged, and physicians and surgeons interested in radiology and physiotherapy will find this meeting well worth attending. It will be noted that this meeting follows immediately after the 4th Annual Physiotherapeutic Convention at the Drake Hotel (October 12th to 16th, 1925)). Visitors to the Convention may well take advantage of this opportunity to attend both meetings, and arrange to stay over in Chicago for an additional week.

Ultra-Violet Ray in Pain; With Case Reports

By W. A. LURIE, M. D.

New Orleans, La.

The relief of pain is one of the conditions which is rather general and often difficult to treat. Perhaps its treatment by the ultra-violet lamp is not so new to most of you, yet I shall outline some case histories which I hope will prove sufficiently interesting to merit your attention.

CASE No. 1. Miss R. B., 22 years old, saleslady. In the past two years had suffered with painful seizures involving the facial areas. These were rather infrequent at first and were referred to some dental condition for which the correction was undertaken. Several teeth were removed and bridges made. The pain was again noticed and subsequently other teeth removed and new bridges made. The attacks of pain began to develop more often and with greater severity until previous to my seeing her she was subjected to attacks daily at eleven o'clock. When these attacks came on the patient would be referred to the medical clinic of her place of employment, where usually she had to be given an injection of morphine to relieve the pain. Her depression and pain prevented her returning to work for two days following such an attack and she would work but to eleven o'clock and repeat the performance.

X-ray of the teeth pictured some nonvital teeth on the painful side but no areas of rarefaction or alveolar absorption. The patient refused to have any additional teeth removed, so after looking into the patient's habits and the regulation of hygienic measure, radiations of ultra-violet rays as produced by the water cooled lamp were given.

Using a quartz throat applicator, the rays were directed upward, backward and inward from a point between the cheek and the upper maxilla just behind the position of the second molar. Radiations of increasing duration which began with two minute sittings and ended with five minutes were begun. Radiations from the same lamp at a six inch distance were given over the skin area externally. These treatments never extended over three minutes. The first treatment was given at the time of an acute seizure. The patient was advised to go home and remain quiet. To the surprise of all, the patient reported for work on the following morning and was immediately sent in for her second treatment. This was given her, and she reported that although she experienced considerable pain during the previous day and night, it was not of the severe character that it had been nor severe enough to have to resort to more than several doses of a mild sedative prescription which she had been given. The next day she reported again and said she experienced very little pain for which she took aspirin and was relieved. After the fourth treatment the patient was told to skip a day but instead she stayed away for several days and when she returned she complained of the return of pain, but not of the old intensity. At this time the treatments were given on successive days and then for four treatments an additional day interval was added. After the tenth treatment the patient again stopped coming but, however, reported that she had no pain. She was seen at rather regular intervals until recently, which is over a period of four years and there has been no return of pain.

CASE No. 2. Mr. S. B., a traveling salesman with headquarters in New York City, had subjected himself to the removal of all the teeth in his upper jaw for the relief of pain in the right side of the head. This pain was described as neuralgic in character and only relieved with morphine. It was for a dose of morphine that this patient presented himself at the office one morning after a sleepless few nights previous to his arrival in this city. He was induced to allow me to give him the treatment as described in the previous case, with the most happy results. He returned to his hotel after the first treatment and was able to rest and even sleep in comfort. (No morphine had been given.) This patient received treatments for the next five days after which time he left the city. Each year for the past three years he reports to me on his arrival in New Orleans, and he reports that there has never been the slightest return of pain since the treatments.

CASES No. 3, 4 and 5. Mrs. I. F., Mrs. E. M., and Mrs.

D. B., are all cases with a history of neuraligia of the tri-facial type all of which found relief through ultra-violet radiations after the manner described.

Two additional cases merit more detailed histories.

Case No. 6. Miss M. R. was referred to me by her father, a local physician. Pain in the upper right jaw was the first noticeable symptom. A tooth was ordered removed for its cure but the promised relief did not materialize. Infection of the sinuses was suspected but none found. In addition to the pain, this patient developed a swelling of the tissues of the face to such an extent that the wearing of glasses was impossible. The use of the eyes without the correcting lenses increased the pain so that the patient was necessarily kept at home, quiet and in the dark. At the time of the first treatment, in this case in addition to the technique previously described, a localizer tube was used and the unfiltered rays allowed to play over the roof of the mouth. A nasal applicator was used to ray the frontal sinuses and nasal areas, and by blocking off the eye-balls with block tin shields, the rays were directed onto the face. The following day the patient reported that she had experienced the most comfortable night she could remember since the onset of her trouble. Eight treatments in ten days sufficed to relieve this patient of all her symptoms and to reduce the swelling so that she left this city for her home in Chicago. I have not heard from her directly, but on several occasions her father, the physician, informed me that she had experienced no further trouble.

Case No. 7. Another more recent, yet nevertheless strikingly surprising case of the relief of pain by ultra-violet radiation can be reported in the case of Miss. A. L., 43 years of age, a school teacher who had suffered for a number of years with lumbago. Some teeth had been removed for the relief of this painful condition without results. Six months prior to the patient coming under my care, she developed a facial neuralgic pain which later involved the ear and right brachial areas. Her teeth were again examined and pronounced good and no extractions were done. On x-ray examination of the whole mouth, eight teeth were condemned, four of which were ordered out at

once. This done, the pain in the ear, face and shoulder did not relieve as was anticipated, but the lumbar pain began to subside. Healing of the mouth progressed normally yet the pain in the head and shoulders persisted. (The teeth were removed by alveolar resection.) Two sittings under a radiant lamp failed to cause any of the pain to subside. One week after oral operation, treatment with ultra-violet ray was begun and within twenty-four hours the patient reported some amelioration of pain, first in the ear, then the shoulder and lastly over the face. The technique used was the same as used in the previously reported cases only the open method of radiation onto the wound areas was substituted instead of the use of the quartz compressor application. It was noted that the mouth tissues almost immediately took on a healthier appearance and all the acute congestion subsided. In nineteen days this patient had ten treatments, two of which were by the radiant light and eight by ultra-violet. This patient reported just previous to the opening of the school session and she had had a two months vacation without the slightest pain.

Pain about the erupting third molars, where x-ray pictured no impaction was similarly relieved in nine of eleven cases with two treatments. The other two cases required four and six treatments respectively and the application of mercurochrome to relieve the local infection which was present.

DOCTOR, HOW DO YOU TREAT
HAY FEVER?
Perhaps you could gain inspiration from an excellent paper in the July issue of the
MEDICAL HERALD
and PHYSIOTHERAPIST
The paper is contributed by Drs. Hollender and Cottle, Chicago, and is entitled
TREATMENT OF HAY FEVER AND ASTHMA,
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American Academy of Physiotherapy

The organization of the American Academy of Physiotherapy was brought about by a need in this field of medicine. The aims of the organization are the standardization of the subject on a scientific basis, the prevention of overenthusiasm concerning methods which have not been thoroughly proved, and the bringing of physiotherapy into its proper place in the various departments of medicine.

The academy is composed largely of medical men who were recognized for their ability in physiotherapy during the world war. It is most fitting, therefore, that the head of physiotherapy in the Army Medical Corps should be chosen as president of the organization, Colonel Frank B. Granger, of Boston. The following excerpt is taken from his address before the first convention of the American Academy of Physiotherapy:

The academy has been organized along broad lines. Provisions have been made for sections such as hydrotherapy, massage, muscle training, physical education, electrotherapy and mechanotherapy. In addition, general sessions will coordinate all these various branches into an intelligent and coordinate whole as an adjunct to all other medical and surgical measures in the treatment of pathological conditions. When this shall have been accomplished the challenge of the cults will have been answered.

In order to accomplish this the support of physicians of the highest professional standing must be enlisted. Therefore it has been proposed to have as associate members those who, while not actually practising physiotherapy, recognize its value and prescribe it for selected cases. This list should and will include the leading men in medicine and surgery.

For active members the test should be professional standing, scientific knowledge of physiotherapy as well as of medicine in general, personality and adequate experience. The standard of admission should be so high that the acceptance of a candidate would at once stamp the applicant as a sound, safe and scientific physician.

The high standard of work done by the members of the organization was revealed in the papers read at Atlantic City during the convention in May. Among the subjects discussed were: Treatment of tuberculous joints and other bone lesions, physiotherapy in reconstructive surgery, the various aspects of ultraviolet rays including physics and the effects on blood chemistry, tuberculous and other conditions, various aspects of electrosurgery and hydrotherapy, while physics in medicine and diagnosis from various angles were carefully discussed.

The next annual meeting of the academy will be held in the Copley Plaza Hotel, Boston, Mass., October 15th to 17th, when technic in various sections of physiotherapy will be clinically demonstrated in the Boston City Hospital by men prominent in these departments.

(From Med. Jour. & Rec.)

Industrial Physiotherapy

By EMILE C. DUVAL, M. D.

The after-treatment of industrial surgical cases affords a large field for the use of physiotherapy. There is no question as to the earlier termination of disability where proper physiotherapeutic measures have been used.

We have at our command today various appliances and modalities, which, when properly used, are very efficacious in helping to shorten the period of disability, and among these we have diathermy, negative galvanism, the faradic current, heliotherapy, hydrotherapy, and, of course, massage and manipulations.

Success in this, as in any other branch of medicine, depends, first of all, on the proper diagnosis, the knowledge of the pathology existing, and then the modality indicated, and the proper application of that modality.

There are a great number of the human ailments that are more or less amenable to physiotherapy, and I might enumerate here a few that we find frequently in the treatment of industrial cases. The sequelae of infectious processes (in the industrial world, mostly in the hand and arm), synovitis, bursitis, sacroiliac conditions, terminal nerve injuries, after-treatment of fracture cases, neuritis (traumatic) and many other conditions, are all more or less successfully treated by physiotherapy.

There are no hard and fast rules in this form of treatment, any more than there are in other forms of treatment, and as every case is a law unto itself, you will by experience evolve methods in the application of modalities of which we know little today. We are constantly hearing from physicians who have improved upon some modality and its mode of application.

In the application of diathermy, we use a number of different electrodes, the metal electrodes consisting, some of them, of tin, and others sheet lead, and the mesh electrode. In articular and peri-articular conditions, we use an electrode of block tin wrapped in cotton, which is held onto the tin by an ordinary bandage. This electrode is soaked in a normal salt solution and then applied. In the treatment of a knee case, for instance, a small electrode of this type measuring approximately four square inches, is placed on each side of the joint, and the current gradually increased to the point where your meter shows a reading of 800 milliamperes. If the case to be treated (we are still referring to knee cases) shows indications of strong adhesions and fibrous formation, a larger electrode of the same type is used, one electrode being placed at least three inches above the knee joint on the anterior surface of the limb, and the other on the posterior surface, and about three inches below the popliteal space.

Cases of bursitis are best treated with the dry block tin electrodes. We have had a number of sub-deltoid cases recently that responded to diathermy when other therapeutic measures failed.

After treatment in cases of fractures of the shaft of long bones, when diathermy is indicated, the cuff method of applying the electrodes is favored by many physiotherapists.

The time necessary for successful treatment with diathermy is approximately one hour, and the amount of current to be used is entirely dependent on the size of the area to be treated.

(Reprinted from "Physiotherapeutic Lectures, Second Edition")

Complete Program of the

4th Annual Physiotherapeutic Convention

For the convenience of the specialist, the program, as will be noted, has been so arranged that the subjects in which he is especially interested come on consecutive days. Twenty-five minutes of the time allotted to each subject will be given to the lecture, and five minutes to discussion led by the chairman of the session. Where necessary, special arrangements will be made for additional time for discussion.

Lectures

Monday, October 12th, 1925

9:30 to 10:00 A. M.—"Why I Use Ultra-violet Energy from Quartz Mercury Vapor Lamps." *By* Leo C. Donnelly, M. D.

10:00 to 10:30 A. M.—"Galvanism—What It Is and Its Accomplishments in a Curative Way." *By* J. U. Giesy, M. D.

10:30 to 11:00 A. M.—"Principles of Hydrotherapy." *By* Chas. E. Stewart, M. D.

11:00 to 11:30 A. M.—"Diathermy in Arthritis." *By* Arthur E. Joslyn, M. D.

11:30 A. M. to 12:00 Noon—"What Physiotherapy May Do to Aid Orthopedic Surgery." *By* F. H. Ewerhardt, M. D.

12:00 Noon to 2:00 P. M.—LUNCH.

2:00 to 2:30 P. M.—"Physiotherapy for the General Hospital." *By* E. C. Henry, M. D.

2:30 to 3:00 P. M.—"The Mouth—Its Possibilities as a Field for Physiotherapeutic Treatments." *By* William A. Lurie, M. D.

3:00 to 3:30 P.M.—"Physiotherapy in a State Hospital." *By* J. C. Elsom, M. D.

3:30 to 4:00 P. M.—"Principles of Light Therapy." *By* Elkin P. Cumberbatch, M. D.

Tuesday, October 13th, 1925

9:30 to 10:00 A. M.—"The Role of Physiotherapy in Defective Hearing." *By* M. H. Cottle, M. D.

10:00 to 10:30 A. M.—"The Application of Physiotherapy to Eye, Ear, and Throat Conditions." *By* Harry M. Thometz, M. D.

10:30 to 11:00 A. M.—"Electrocoagulation of Minor Malignancies." *By* A. L. Yocom, Jr., M. D.

11:00 to 11:30 A. M.—"Direct Current Coagulation in Cancer." *By* G. Betton Massey, M. D.

11:30 A. M. to 12:00 Noon—"Electrocoagulation in Malignancy of the Accessible Cavities of the Body." *By* Gustav Kolischer, M. D.

12:00 Noon to 2:00 P. M.—LUNCH.

2:00 to 2:30 P. M.—"When Shall We Treat the Painful Point?" *By* Curran Pope, M. D.

2:30 to 3:00 P. M.—"Electrocoagulation of Tonsils." *By* Raymond F. Elmer, M. D.

3:00 to 3:30 P. M.—"Electrocoagulation of Surface Malignancies." (Illustrated with lantern slides.) *By* T. Howard Plank, M. D.

3:30 to 4:00 P. M.—"Surgical Diathermy." *By* W. B. Chapman, M. D.

4:00 to 4:30 P. M.—"Light in the Treatment of Infection." *By* E. C. Henry, M. D.

Wednesday, October 14th, 1925

9:30 to 10:00 A. M.—"How I Use Ultra-violet Energy from Quartz Mercury Vapor Lamps." *By* Leo C. Donnelly, M. D.

10:00 to 10:30 A. M.—"Arthritis." *By* Miles J. Breuer, M. D.

10:30 to 11:00 A. M. —"Report of Metastatic Carcinoma of the Liver Relieved by Diathermy." *By* Albert F. Tyler, M. D.

11:00 to 11:30 A. M.—"Diathermy—Its Principles and Application." *By* Elkin P. Cumberbatch, M. D

11:30 A. M. to 12:00 Noon—"Medical Diathermy in Infections of the Genitourinary Tract." *By* Gustav Kolischer, M. D.

12:00 Noon to 2:00 P. M.—LUNCH.

2:00 to 2:30 P. M.—"Physiotherapy in Internal Medicine." *By* George W. Funck, M. D.

2:30 to 3:00 P. M.—"Principles Underlying the Clinical Application of Physiotherapeutic Agents in Hay Fever and Asthma." *By* A. R. Hollender, M. D.

3:00 to 3:30 P. M.—"The Value of Physiotherapy in Medicine and Surgery." *By* Arthur E. Joslyn, M. D.

3:30 to 4:00 P. M.—"General Principles of Treatment in Pulmonary Tuberculosis." *By* Roswell T. Pettit, M. D.

4:00 to 4:30 P. M.—"Diagnosis of Intestinal Toxemia and Treatment by Physical Means." *By* Frederick H. Morse, M. D.

Thursday, October 15, 1925

9:30 to 10:00 A. M.—"Carcinoma of the Uterus—Treatment by Physical Means." *By* Albert F. Tyler, M. D.

10:00 to 10:30 A. M.—"My Observations in European Physiotherapeutic Clinics." *By* Disraeli W. Kobak, M. D.

10:30 to 11:00 A. M.—"Physiotherapy in Treatment of Gynecological Conditions." *By* Frank H. Walke, M. D.

11:00 to 11:30 A. M.—"Diathermy in Gynecology." *By* W. B. Chapman, M. D.

11:30 A. M. to 12'00 Noon.—"Diathermy in Medical Kidney Diseases." *By* Gustav Kolischer, M. D.

12:00 Noon to 2:00 P. M.—LUNCH.

2:00 to 2:30 P. M.—"Physiotherapy in Industry—Its Economic Value." *By* Emile C. Duval, M. D.

2:30 to 3:00 P. M.—"Uses of Physiotherapy in Industrial Surgery." *By* Clarence M. Westerman, M. D.

3:00 to 3:30 P. M.—"Ionization in Surgical Tuberculosis." *By* G. Betton Massey, M. D.

3:30 to 4:00 P. M.—"Diathermy in Chronic Disorders." *By* Chas. E. Stewart, M. D.

Friday, October 16, 1925

9:30 to 10:00 A. M.—"The Tonic Effects of Ultra-violet Radiations in Children." *By* Israel L. Sherry, M. D.

10:00 to 10:30 A. M.—"A Discussion of Wave Lengths." *By* T. Howard Plank, M. D.

10:30 to 11:00 A. M.—"Heliotherapy in Tuberculosis." *By* Roswell T. Pettit, M. D.

11:00 to 11:30 A. M.—"The Quartz Light—A General Consideration." *By* J. U. Giesy, M. D.

11:30 A. M. to 12:00 Noon—"Direct Current Therapy." *By* Frederick H. Morse, M. D.

12:00 Noon to 2:00 P. M.—LUNCH.

2:00 to 2:30 P. M.—"The Actinic Ray in General Practice."
By Wm. E. Howell, M. D.

2:30 to 3:00 P. M.—"Galvanotherapy with Electrical Diagnosis."
By Elkin P. Cumberbatch, M. D.

3:00 P. M.—Valedictory. *By* Curran Pope, M. D.

Clinics and Discussions

Each morning and afternoon during the Convention, Clinics and discussions on allied subjects will be held in special rooms on the mezzanine floor of the Drake and at various Chicago hospitals. Some thirty of these have been scheduled thus far, and more will be arranged during the Convention to meet the needs of attending physicians and surgeons. A complete program of these Clinics and discussions will be presented to every visitor upon registration.

Applications for accommodations at the Drake and other hotels will of course be filled in the order of their receipt. It is suggested, therefore, that those who plan to attend the Convention notify the sponsors as early as possible.

Special Railroad Fares

Reduced railroad fares at the rate of one and one-half fares for the round trip to Chicago, have been granted for Fellows and members of their families. Those who register may apply for "certificates" when buying their tickets to Chicago. Further information will be given by the Secretary.

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Electrocoagulation in Surgery

By WILLIAM D. McFEE, M. D.
Boston, Mass.

To practice surgery successfully with the high frequency current, one must first have a satisfactory equipment; there is a great deal of high frequency apparatus now in the market, good, bad and indifferent. In selecting the apparatus which he is to use one should make a thorough investigation and try to determine just what is best for the particular work which he intends to accomplish; too much reliance should not be placed on the statements of the manufacturer or the salesman whose chief object is to effect the sale of his goods.

For the purposes of electrosurgery an apparatus should be obtained which has a constant and consistent output of current, and which will produce the required quality of spark or contact heat effect. For all round purposes of electrosurgery one of the ordinary oil immersed transformers made by a reliable concern is to be preferred; of these there is the large type and the small, which is portable. Of the portable machines very few are reliable for heavy work, such as the treatment of large, thick growths.

The spark gap which regulates the quality and volume of the electrical discharge is a very important part of the apparatus; it has to be cleaned and adjusted from time to time, so that some attention should be paid to this in choosing an apparatus for our use.

The best results in this work, particularly in those cases of inaccessible growths, will be obtained by the joint efforts of the surgeon skilled in the knowledge and use of knife surgery, and the surgeon having similar knowledge of and skilled in the surgical use and action of electricity. To know when to do and what to do under particular circumstances with either or both of these methods requires much painstaking study and observation and much practical experience.

In the operation for the removal of cancer, the following technic has been successfully employed by the writer:

An active electrode, consisting of a surgical knife, fitted in an insulated handle, is used in contact with the tissue to be removed. A large indifferent metal electrode is applied to some opposing surface, the patient under general anesthesia. The current used is that delivered from a good high frequency apparatus of the D'Arsonval type which will deliver a high milliamperage and remain constant in action. The current is turned on by an assistant and gradually increased until coagulation appears, as shown by the cooking of the tissue. The knife, which is inserted just beyond and below the margin of the growth, is then gradually moved through the circumference with a rotary motion, the growth being lifted with the other hand by means of a suture imbedded in the structure or by forceps. As it becomes separated this is continued until the growth is entirely removed. If conditions and technic are right, no bleeding should result and a clean, seared surface is assured. Very little if any pain follows, and a superficial slough occurs.

The method of electrocoagulation is adapted to a great variety of lesions and growths in many parts of the body, and my interest has been particularly attracted to the good results obtained in the treatment of a number of cases similar to the following:

CASE I.—J. S., aged eighty, was operated on by me for the removal of a papillary carcinoma, about the size and thickness of an English walnut, at the base of the tongue, according to the following technic: The patient was anesthetized with ether, the head being raised and the mouth propped open with a mouthgag placed in the opposite side of mouth; the tongue was held in position by a long suture passing through its centre; the cheek was divided by a lateral incision extending from the angle of the mouth to a point midway to the angle of the jaw, thus exposing the growth which was removed by cutting it away with a knife electrode according to the method of electrocoagulation previously described. There was no bleeding, as all vessels were immediately closed off by the heat from the current as the operation proceeded. The surface left, after removal, was gone over by the desiccation spark and the line of demarcation was well beyond the diseased tissue. The absence of bleeding makes it much easier to visualize just what is taking place in the operative field, and we are thus able to perform our work with more definite accuracy. By this method we are also more sure of destroying malignant cells which may be at some distance beyond the growth, thus diminishing any tendency toward recurrence.

CASE II.—R. W., aged fifty-five, was operated on by me two years ago for the removal of an extensive leucoplakia involving the cheek adjacent to the left lower jaw; this case had been previously treated by radium for one year with no result except that the disease was much aggravated, the patient suffering considerable pain after each application. The radium treatment in this case was given by a physician who was skilled in its use through many years' experience. The diseased tissue was removed by electrocoagulation; the indifferent metal electrode, size eight by ten inches, was placed under the shoulders and the surgical knife, in an insulated handle, was used as the active electrode; this was carried around the growth beyond its margin, the growth being gradually lifted from its bed as it was separated by the current contact. Sloughs covered all the coagulated area, which is usual, and these separated in about two weeks. During this time the patient was able to be about every day, had very little discomfort, required no narcotics, and had no blood loss during or after the operation. Up to the present time the area treated has held its full degree of improvement.

Malignant conditions involving the mucous membranes, as cancer of the tongue, leucoplakia, etc., usually respond very little if any to treatment by x-rays or radium alone, but remarkable results are secured when electrocoagulation is used followed in some cases by ultra-violet radiation or x-ray. In coagulating tissue which is close to bony structures care should be exercised not to coagulate deeply enough to destroy the periosteum, as it takes considerable time, even many months in some cases, for this to heal. The entire bone structure may be destroyed when necessary. Caution should also be exercised in all these treatments to see that the indifferent electrode closely approximates the skin surface; it should be held in place by a bandage preferably of elastic material, so that if the patient moves it is not so easily dislodged. Very severe burning may result from loose or improper electrical contact due to the arc formed in the air space between the electrode and skin; good electrical contact therefore must be maintained throughout the entire operation.

Electrocoagulation, if properly performed, should be followed by no surgical shock, no hemorrhage, and no loss of blood during or after the operation. In treating growths in the mouth, sometimes our coagulation will not go beyond the point of actual contact, and it is well to watch these cases during the sloughing process so as to guard against possible bleeding when the slough begins to separate; this, however, will very seldom occur. While the operation of electrocoagulation is going on, if any bleeding should occur, it may be immediately controlled by applying the active electrode to its source.

While the foot switch may be used by the operator to turn the current on and off, it has the disadvantage of dividing his attention between his hands and feet also, when using the foot switch, the current strength cannot be regulated; so that for the ordinary purposes of any electrocoagulation operation the aid of a good assistant, stationed at the apparatus, who can quickly change the control switch of the transformer so that it will deliver a greater or less amount of current, changing at once when signalled by the operator, gives the most satisfactory results.

The operator may disregard any meter reading when using electrical currents to coagulate, as his best guide is his observation of the changes taking place, or in other words, the reaction in the destroyed tissue. The amount and character of current used, together with the time of its application, must depend largely on his knowledge gained from previous experience.

The dissection of the growth by using the high frequency current with the spark gap in circuit and the surgical knife for the active electrode will certainly produce some most interesting results.

I believe this work has a wonderful future field of usefulness, as it will no doubt be given increased attention by those in our profession who are qualified to develop its many important qualities. *(Abstracted from Med. Jour. & Rec. July, 1925)*

Arthritis

Arthritis is essentially an inflammation of an entire joint. It may be acute or chronic, the acute stage lapsing naturally into the chronic when the local pain is treated without due attention to the basic causes.

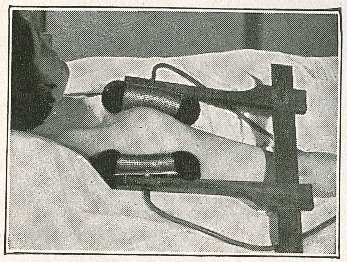
Unquestionably the most important feature of the diagnosis and treatment of any case of arthritis is the discovery and the removal of these underlying causes. There is a source of toxic poison somewhere in the system of the patient suffering from arthritis. Find it, and you have taken the first step toward relief.

The colon is always to be suspected. Decayed teeth are often at the root of the trouble, as is sinus trouble, or indeed any source of toxins. The genital organs should always be thoroughly examined, and the patient examined for indication of specific disease. If this is present, treatment must be instituted to clear it up before the arthritis can be brought under control.

The acute stage frequently follows exposure to cold and dampness, and these conditions are sometimes erroneously accepted by the patient as the cause of the disease. As a matter of fact, they have merely served to bring the trouble to a focus.

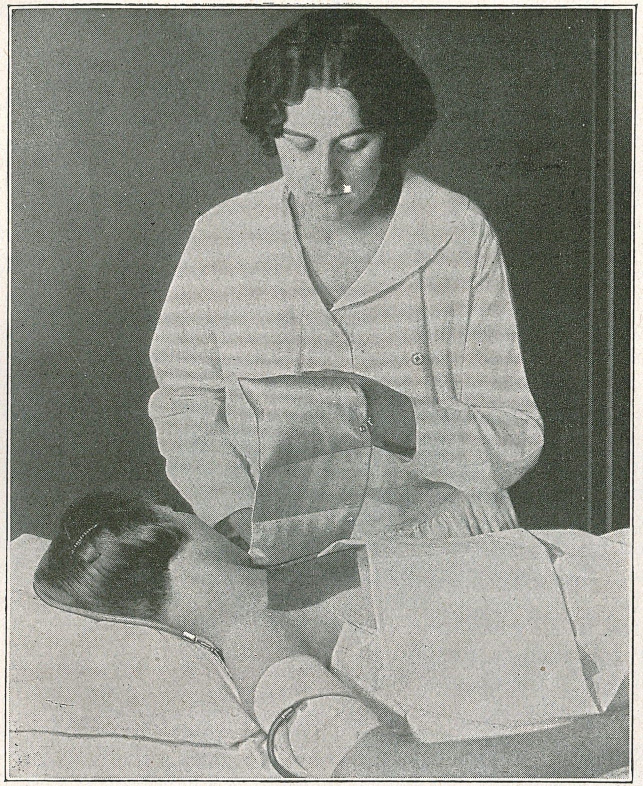
After the cause is removed, diathermy treatment may be instituted in all cases, and is accepted by physiotherapists as the most satisfactory method of curing the acute disease and arresting it in the chronic stages.

With diathermy we can produce an active hyperemia in the diseased joint, hyperemia being one of nature's methods of overcoming a pathological condition, thus reducing congestion and having a tendency to absorb soft exudates.



Application of Electrodes to Shoulder in Arthritis, by means of Diathermy Clamp.

Physiotherapy in arthritis is no longer an experiment, its therapeutic value has been proven beyond a question of a doubt. It now ranks with medicine and surgery as a therapeutic agent.



Arthritis of Shoulder

This is a condition frequently met with in medical practice, and one in which diathermy treatment is of exceptional value. Electrodes are applied as shown in the illustration, large tin plate or mesh electrodes on both chest and back near shoulder, and mesh cuff electrode on upper arm. Diathermy clamp with mesh sponge electrodes, shown on preceding page, may be used if desired. Treatment given as described on next page.

Treatment of Arthritis

Diagnosis—Arthritis of shoulder.

Symptoms—Pain, tenderness.

Treatment—Medical Diathermy.

Milliamperes—1200 to 2000.

Method—Plate beneath shoulder, mesh over intra-clavicular space, both on one pole, mesh cuff on upper arm, on other pole.

Time—Thirty minutes.

Indications—All cases.

Contra-indications—None.

(Reprinted from "Diathermy Therapy," Published by H. G. Fischer & Company, Inc.)

Electrotherapeutic Apparatus

By WILLIAM MARTIN, M. D.

Atlantic City, N. J.

To the Editor: In The Journal, June 20, is a question asked by Dr. S. B. Koory of Schuyler, Neb., relative to the value of the various electrotherapeutic apparatus. In reading this over, one gains the impression that the high frequency apparatus is fitted or used mainly for fulguration, desiccation or electrocoagulation, the answer merely mentioning diathermy and autocondensation. It is difficult to give a detailed answer to such a question, but it might be well to stress the value in other directions, as, for instance, diathermy and autocondensation in the many metabolic conditions which are peculiarly amenable to electrotherapy properly applied, and for which drugs do so little. Other modalities as well are valuable, such as the static and constant currents, actinic and radiant energy.

Naturally, the salesman is commercial, and too many physicians permit him to give all the education they ever receive before taking up the work. I feel that we cannot too well equip ourselves with the proper knowledge of the physics and therapeutic applications of the currents before starting out to cope with the ills of mankind. Our incompetence in the past has had largely to do with the ban on electrotherapeutics under which it labored for many years.

(From Journal A. M. A. July 11, 1925)

Quartz Lamp Therapy in Oral Conditions

By LOUIS B. LIPPMAN, D. D. S.
New York City
From the Dental Department Mount Sinai Hospital

Quartz light therapy is being used by physicians with marked success, especially in the treatment of skin diseases and chronic suppurating conditions. Its application has even been successful in the treatment of certain types of baldness. The results obtained with the quartz lamp at the Naval Hospital, Brooklyn, N. Y., led the writer, while stationed there, to attempt its use in oral conditions. Suitable applicators were designed, and a series of cases, ranging from simple gingivitis to morbid pyorrhea, were placed under treatment. In those cases where much loss of process existed no marked change was noted in the firmness of the teeth. But in all the cases treated, all purulent discharge was stopped and the gums resumed a healthy tone. Bacteriologic examination exposed the presence of Vincent's bacilli, which proved negative after the fifth treatment in the less severe cases, and after the tenth in the worst.

At that time treatment was commenced with a one-minute exposure, and increased daily by one minute for four days, after which five-minute exposures were made. Since then the light has been applied in cases other than pyorrhea, such as Vincent's Angina, cellulitis, periostitis, neuralgia, post-operative pains, and in all post-operative procedure about the mouth, with most gratifying results.

Treatment must be intensive while it lasts. Since it is not practicable in private practice for most patients to appear daily for treatment, it has been necessary to somewhat alter the technic. Unfortunately, no definite law can be made for the length of exposure. People of light complexion will react more readily than those who are dark. It is necessary that the operator depend a great deal on his own judgment. It is best to start with short exposures and gradually work up to longer ones.

The penetration of the rays is dependent on the following factors; distance at which the applicator is held from the point of application, current strength, and length of exposure. Where deep penetration is desired, as in pyorrhea, abscess conditions, periostitis, etc., the applicator is brought into contact with the tissues under pressure, causing dehematization, and treatment is begun with a two or three minute exposure, and each successive treatment is increased by two or three minutes until five or eight minutes are given. In exposing open wounds in the mouth to the rays, the applicator is held from one-half to one inch from the wound and treatment may be begun with three or four minute exposures and be gradually increased up to ten minutes.

The moist mucous membranes will stand a greater exposure than the skin. Therefore, when the rays are applied externally, the applicator is held from three to four inches from the skin, and two to four minute exposures are usually sufficient.

Reaction occurs within about five hours after exposure and manifests itself in a slight reddening of the skin, growing more tan with each successive exposure, simulating a sunburn. After treatment is stopped the skin will peel and gradually reassume its normal color.

Too great an exposure may result in severe reactions and form vesicles on the mucous membrane or a painful burn on the skin. The pain and discomfort are temporary and usually disappear in two or three days. If a burn occurs, treatment should be stopped until the burn is healed, and then resumed with shorter exposures. Coating the burn with vaseline will hasten recovery.

In conclusion it may be said that ultra-violet ray therapy has a distinct field of usefulness in the treatment of oral conditions, and that the beneficial effects derived therefrom are dependent on the following factors:

(1) It is germicidal in action.

(2) It stimulates cell-activity, thereby promoting phagocytosis and the processes of metabolism.

(3) It exerts an oxydizing action on the blood.

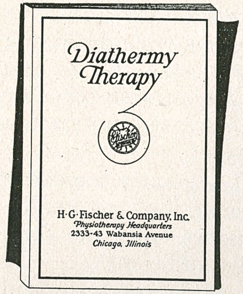
(4) It eliminates to a great extent the use of chemicals which, besides being germicidal, are also cytocidal.

(5) It produces an analgesic effect on terminal nerve fibres.

(6) Its proper application involves no pain or discomfort for the patient. *(Abstracted from the International Journal of Orthodontia)*

"Diathermy Therapy"

An Instructional Book for Physicians



This book of 124 pages, profusely illustrated, contains a full discussion of all the modalities used in diathermy therapy. In addition, there is an A to Z list of indications and treatments, both medical and surgical. Each subject is discussed, and technic given for diathermy treatment. The application of electrodes is shown by actual photographs taken under the supervision of physicians widely experienced in the use of electro-therapeutic modalities. Flexible binding. Price, $1.00.

Send Your Order to Educational Department,
H. G. Fischer & Company, Inc.

Diathermy in Gonococcal Infection

Review of a monograph by E. P. Cumberbatch, M.A., B.M., B.Ch. Oxf., M.R.C.P., and C. A. Robinson, M.B., B.Ch., D.M.R.E., Camb.

This admirable monograph records the results obtained by the writers in the treatment of gonoccocal infection (with or without complications) by diathermy. The treatment is described in detail and the facts are presented so moderately as to leave no doubt in the mind of the unbiased that diathermy in the hands of careful experts has a wide field of usefulness in the treatment of these conditions. The authors very wisely do not claim absolute cure as inevitable after a course of treatment by diathermy, but their cases quoted—with clinical notes before and after treatment—are in almost every case highly satisfactory.

An appendix describes five cases of arthritis where the cervix uteri seemed to be the focus of infection, but where gonoccocal infection was not proved by pathological tests; these cases showed gratifying improvement after application of diathermy to the urethra and cervix, and should stimulate practitioners who have patients suffering from arthritis to have a pelvic examination made in every case where the primary focus of infection has not been satisfactorily discovered.

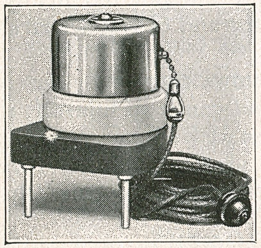
(*From The Lancet, July 4, 1925*)

Dr. Cumberbatch will lecture at the Fourth Annual Physiotherapeutic Convention on October 12th, 14th, and 16th. Full program of the Convention is given elsewhere in this book.—Editor.

Annual Meeting of American Electrotherapeutic Association

All legally licensed physicians are cordially invited to attend the *35th Annual Meeting* of the *American Electrotherapeutic Association* to be held at the Hotel Drake, Chicago, September 15-18, 1925.

Breuer Safety Switch



The terminals of this switch are made to fit the foot switch openings on all Fischer Diathermy Outfits. The switch operates with a pull cord, just like an electric light socket, so that either the physician or the patient may turn the current on or off in a moment. Patients like to feel that they can turn the Diathermy current off, if "anything should happen" while the physician or the nurse is temporarily absent. This switch gives them a feeling of perfect safety.

No. 86, Breuer Safety Switch, complete with insulated pull cord. Each $5.75

Diathermy to Fingers — Simple Method

By A. B. FISCHER, M. D.
Brooklyn, N. Y.

The following is a simple method of applying the diathermy current to fingers:

Armamentaria: The auto-condensation pad, the auto-condensation handle, a strip of zinc oxide adhesive tape.

The electrodes are connected to the diathermy or auto-condensation poles of the machine. The latter poles supply more concentrated diathermy effects.

The patient is placed in the sitting posture on the pad, a pillow or book is placed in the lap, and the hand electrode is then placed on that article. A foot stool may be used to prop up the knees. The finger or fingers requiring the treatment are then strapped to the handle with adhesive tape, the other fingers being flexed into the palm. The current is then applied, first weakly and gradually up to the patient's tolerance. Then the patient is informed that if the fingers get too warm, relief will be prompt if one or more of the well fingers are applied to the handle one at a time. This serves as a splendid rheostat. First one and then another should be applied if necessary and then removed if desirable.

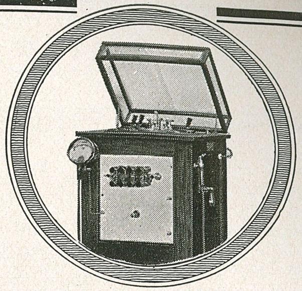
No sparks occur if the operator is careful to strap at least one finger properly to the handle, i. e., snugly but not too firmly. The adhesive tape is a fairly good conductor and obviates sparks and poor contact.

The patient is then comfortable and knows that he or she is not at the mercy of the operator, alone, but can help himself, if necessary.

After the first treatment, subsequent applications are very convenient, comfortable and effective, as well as appreciated by the patient.

This method does away with the saline solution method which is sloppy, inconvenient and not more efficient.

The amount of current can be more easily adjusted, both by patient and the operator, and is more continuously applied.



**For Successful
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You Need Adequate
Diathermy Apparatus**

**The Fischer "L-O" Senior
Supplies Every Needed Modality**

Latest product of the Fischer engineers, this remarkably complete and efficient cabinet embodies all the perfections of a long line of worthy predecessors, together with some new features of its own.

Both for Medical and for Surgical Diathermy, the "L-O" Senior delivers the correct current, properly modulated, instantly controlled. It lightens the work of physician and assistant, and is a most ornamental piece of equipment in any office.

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A PAGE OF FUN

Mamma—"Where have you been, Johnnie?"

Small Boy—"Playing ball."

Mamma (severely)—"But I told you to beat the rug, didn't I?"

Small Boy—"No, ma'am, you told me to hang the rug on the line and beat it."

□ □ □

Maid—"I couldn't come yesterday, Miss Jackson. I was suffering that badly with pain in my chest."

Mistress—"What was it, Melissa? Dyspepsia?"

Maid—"Yes'm, it was. But the doctor, he calls it an attack of acute indiscretion."

□ □ □

"Did you ever have the telephone bell ring when you were in the bath and there was nobody else at home?"

"Oh, yes," replied the family man.

"What did you do?"

"Well, I play a little golf and I have also addressed a few remarks to a punctured tire, so you can draw your own conclusions."

□ □ □

"To what one thing do you attribute the spirit of harmony which seems to pervade your entire studio?" asked a visitor of Douglas Fairbanks the other day.

"I always try to make friends of my business associates," Doug replied, "but not business associates of my friends."

Henry, who married in New York, brought his wife home to his father's farm. It was her first experience of country life.

The first evening of her visit she looked on with interest while the cows were being milked.

"Would you like to try it?" she was asked.

The bride was doubtful. "I think I could start the milk, but I—I'm afraid I couldn't stop it."

□ □ □

Mistress—"You say you worked for the Van Trillers. Can you prove that?"

New Maid—"Well, mum, I can show you some spoons and things with their initials on them."

□ □ □

Lady—"Here, my poor fellow, is a quarter for you. It must be dreadful to be lame, but I think it must be worse to be blind."

Tramp—"It is, mum. When I was blind they was handing me counterfeit quarters."

□ □ □

A poor man who had hardly been able to supply his wife and family with the necessities of life received a substantial legacy.

"At last, my dear," he said to his wife "you will be able to buy yourself some decent clothes."

"I'll do nothing of the kind," she said. "I'll get the same kind the other women wear."

Last Call for the
Sept. Physiotherapy Meeting
for Physicians and Surgeons

Monday, September 14, 1925

EMILE C. DUVAL, M. D., Chicago, Ill.
"Indications for Diathermy"..10:00 to 11:00 A. M.

A. R. HOLLENDER, M. D., Chicago, Ill.
"Light Therapy in Otitis Media"............................11:00 to 12:00 A. M.

EMILE C. DUVAL, M. D., Chicago, Ill.
"A Scientific Basis for Diathermy Technic"........ 1:30 to 2:30 P. M.

M. H. COTTLE, M. D., Chicago, Ill.
"Indications for Diathermy in Eye, Ear, Nose and Throat Diseases".. 2:30 to 3:30 P. M.

Specializing in Industrial Physiotherapy, as he does, Dr. Duval is in a position to speak with an authority based on a remarkably broad experience. Physicians and surgeons desiring information as to when and how to employ Diathermy will do well to attend his lectures. Drs. Hollender and Cottle likewise have specialized extensively in eye, ear, nose and throat work and their experience, over a period of years, with physiotherapy in such disorders, qualifies them to pass on to others much interesting and valuable data.

Ample lecture-hall facilities have been provided, and visiting physicians and surgeons are assured of proper facilities for getting the most out of this splendid program. There is, of course, no fee—just come to the main office and accommodations will be provided for you.

H. G. FISCHER & CO., Inc., Phone Armitage 0323
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